# Union of Two Fuzzy Sets

A **=** dict()

B **=** dict()

Y **=** dict()

A **=** {"a": 0.2, "b": 0.3, "c": 0.6, "d": 0.6}

B **=** {"a": 0.9, "b": 0.9, "c": 0.4, "d": 0.5}

print('The First Fuzzy Set is :', A)

**print**('The Second Fuzzy Set is :', B)

**for** A\_key, B\_key **in** zip(A, B):

    A\_value **=** A[A\_key]

    B\_value **=** B[B\_key]

**if** A\_value > B\_value:

        Y[A\_key] **=** A\_value

**else**:

        Y[B\_key] **=** B\_value

print('Fuzzy Set Union is :', Y)

# Intersection of Two Fuzzy Sets

A **=** dict()

B **=** dict()

Y **=** dict()

A **=** {"a": 0.2, "b": 0.3, "c": 0.6, "d": 0.6}

B **=** {"a": 0.9, "b": 0.9, "c": 0.4, "d": 0.5}

print('The First Fuzzy Set is :', A)

**print**('The Second Fuzzy Set is :', B)

**for** A\_key, B\_key **in** zip(A, B):

    A\_value **=** A[A\_key]

    B\_value **=** B[B\_key]

**if** A\_value < B\_value:

        Y[A\_key] **=** A\_value

**else**:

        Y[B\_key] **=** B\_value

print('Fuzzy Set Intersection is :', Y)

# Complement of Two Fuzzy Sets

A **=** dict()

Y **=** dict()

A **=** {"a": 0.2, "b": 0.3, "c": 0.6, "d": 0.6}

**print**('The Fuzzy Set is :', A)

**for** A\_key **in** A:

   Y[A\_key]**=** 1**-**A[A\_key]

print('Fuzzy Set Complement is :', Y)

# Difference Between Two Fuzzy Sets

A **=** dict()

B **=** dict()

Y **=** dict()

A **=** {"a": 0.2, "b": 0.3, "c": 0.6, "d": 0.6}

B **=** {"a": 0.9, "b": 0.9, "c": 0.4, "d": 0.5}

**print**('The First Fuzzy Set is :', A)

**print**('The Second Fuzzy Set is :', B)

**for** A\_key, B\_key **in** zip(A, B):

    A\_value **=** A[A\_key]

    B\_value **=** B[B\_key]

    B\_value **=** 1 **-** B\_value

**if** A\_value < B\_value:

        Y[A\_key] **=** A\_value

**else**:

        Y[B\_key] **=** B\_value

**print**('Fuzzy Set Difference is :', Y)